

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number
WO 2004/020729 A1

- (51) International Patent Classification⁷: **D06M 13/467**, 13/00, 13/224, D21H 17/07
- (21) International Application Number:
PCT/EP2003/009164
- (22) International Filing Date: 19 August 2003 (19.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02405723.4 27 August 2002 (27.08.2002) EP
- (71) Applicant (*for all designated States except US*): CIBA SPECIALTY CHEMICALS HOLDING INC. [CH/CH]; Klybeckstrasse 141, CH-4057 Basel (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): KOLLER, Stefan [CH/CH]; Zelgliring 31, CH-4433 Ramllinsburg (CH). HALL-GOULLE, Véronique [FR/CH]; Ramstelweg 19, CH-4143 Dornach (CH).
- (74) Common Representative: CIBA SPECIALTY CHEMICALS HOLDING INC.; Klybeckstrasse 141, CH-4057 Basel (CH).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR DELIVERING BIOLOGICALLY ACTIVE SUBSTANCES

(57) Abstract: The present application relates to a method for the controlled and/or slow release of a biologically active hydroxyl group containing substance on a substrate which comprises reacting said hydroxyl group containing substance subsequently with a halogen-substituted aliphatic carboxylic acid halide and either a diamine containing at least one tertiary amino group or a heterocyclic aromatic amine, applying the thus obtained water-soluble ester to the substrate and finally hydrolysing the ester on the substrate.

WO 2004/020729 A1

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/09164

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D06M13/467 D06M13/00 D06M13/224 D21H17/07

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 D06M D21H B27K C03C C11D C08J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 752 465 A (PROCTER & GAMBLE) 8 January 1997 (1997-01-08) page 3, line 31 - line 43 page 12, line 44 - line 59 example 5	1-6, 9-11
X	EP 0 771 785 A (PROCTER & GAMBLE) 7 May 1997 (1997-05-07) page 3, line 55 - page 4, line 46 page 7, line 42 - page 8, line 29	1-6, 9-11
X	WO 95 08976 A (USON ISABEL MARIA ; DEMEYERE HUGO JEAN (BE); HARTMAN FREDERICK ANTH) 6 April 1995 (1995-04-06) page 3, line 1 - page 5, line 6	11
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

19 November 2003

Date of mailing of the international search report

02/12/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Flocco, M

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/09164

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>EP 0 799 885 A (PROCTER & GAMBLE) 8 October 1997 (1997-10-08) page 2, line 47 -page 3, line 40 -----</p>	11

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/09164

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0752465	A	08-01-1997	EP 0752465 A1	08-01-1997
			BR 9608747 A	17-02-1999
			CA 2222708 A1	05-12-1996
			CN 1192776 A	09-09-1998
			JP 11506486 T	08-06-1999
			WO 9638528 A1	05-12-1996
EP 0771785	A	07-05-1997	EP 0771785 A1	07-05-1997
			AT 211728 T	15-01-2002
			AU 7522396 A	22-05-1997
			BR 9611296 A	13-07-1999
			CA 2236430 A1	09-05-1997
			CN 1328122 A	26-12-2001
			CZ 9801331 A3	16-09-1998
			DE 69524956 D1	14-02-2002
			DK 771785 T3	04-03-2002
			HU 9901869 A2	28-09-1999
			JP 11500451 T	12-01-1999
			JP 3222143 B2	22-10-2001
			PT 771785 T	28-06-2002
			WO 9716407 A1	09-05-1997
WO 9508976	A	06-04-1995	AU 7840994 A	18-04-1995
			BR 9407725 A	04-03-1997
			CA 2171421 A1	06-04-1995
			CN 1135172 A ,B	06-11-1996
			CZ 9600925 A3	12-06-1996
			DE 69431253 D1	02-10-2002
			DE 69431253 T2	30-04-2003
			EG 20670 A	30-11-1999
			EP 0729344 A1	04-09-1996
			ES 2179850 T3	01-02-2003
			FI 961437 A	29-03-1996
			HU 74082 A2	28-10-1996
			JP 9503536 T	08-04-1997
			NO 961294 A	29-03-1996
			TR 28155 A	08-02-1996
			WO 9508976 A1	06-04-1995
			ZA 9407664 A	24-05-1995
EP 0799885	A	08-10-1997	EP 0799885 A1	08-10-1997
			AU 2590897 A	22-10-1997
			BR 9710416 A	17-08-1999
			CA 2250837 A1	09-10-1997
			CN 1220693 A	23-06-1999
			JP 2000509107 T	18-07-2000
			WO 9736978 A1	09-10-1997
			US 5958870 A	28-09-1999
			ZA 9702775 A	24-10-1997